Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. **(Original)** A method for crystallizing a human beta secretase molecule or molecular complex comprising:

preparing purified human beta secretase in the presence of an inhibitor; and

crystallizing human beta secretase from a solution having a pH of about 3.5 to about 5.5.

2. **(Currently Amended)** The method of claim 6 [[1]] wherein the salt is selected from the group consisting of sodium chloride, ammonium sulfate, magnesium sulfate, lithium sulfate, and combinations thereof.

3. **(Original)** The method of claim 1 wherein the solution has a pH of about 4.0 to about 4.7.

4. **(Original)** The method of claim 1 wherein the solution comprises a buffer having a pK_a of about 3 to about 6.

5. **(Currently Amended)** The method of claim 13 [[1]] wherein the glycol is selected from the group consisting of PEG, PEG-MME, PEG-DME, polyoxyalkylenepolyamines, and combinations thereof.

6. **(Original)** The method of claim 1 wherein the solution further comprises a salt.

7. **(Original)** The method of claim 6 wherein the salt is present in a concentration of about 0.001 M to about 0.5 M.

8. **(Original)** The method of claim 1 wherein the solution includes up to about 40% by weight organic solvent.

9. **(Original)** The method of claim 8 wherein the organic solvent is DMSO.

10. **(Original)** The method of claim 1 wherein the solution further comprises up to about 40% by weight ethylene glycol or glycerol.

11. **(Original)** The method of claim 1 wherein the beta secretase is present at a concentration of about 1 mg/ml to about 80 mg/ml.

12. **(Original)** The method of claim 1 wherein the inhibitor is present at a concentration of about 0.1 to about 10 mM.

13. **(Original)** The method of claim 1 wherein the solution further comprises about 5% by weight to about 50% by weight of a glycol.

14. **(Original)** The method of claim 13 wherein the glycol is a monomeric or polymeric glycol.

15. **(Original)** The method of claim 1 wherein the human beta secretase is isolated from mammalian cells.

16. **(Original)** The method of claim 15 wherein the mammalian cells are CHO-K1 cells.

17. **(Original)** The method of claim 15 wherein the mammalian cells are HEK 293 cells.

18. **(Currently Amended)** The method of claim 1 wherein the human beta secretase is isolated from insect cells as part of a [[the]] Baculovirus expression system.

19. **(Withdrawn)** A crystal of beta secretase having the trigonal space group symmetry $P3_221$.

20. **(Withdrawn)** A crystal of beta secretase comprising a unit cell having dimensions of a, b, and c, wherein a is about 77 Å to about 147 Å, b is about 77 Å to about 147 Å, and c is about 77 Å to about 147 Å; and $\alpha=\beta=90°$, and $\gamma=120°$.

21. **(Withdrawn)** A crystal of beta secretase having the trigonal space group symmetry $P3_221$ and comprising a unit cell having dimensions of a, b, and c, wherein a is about 77 Å to about 147 Å, b is about 77 Å to about 147 Å, and c is about 77 Å to about 147 Å; and $\alpha=\beta=90°$, and $\gamma=120°$.

22. **(Withdrawn)** The crystal of claim 21 having amino acid sequence SEQ ID NO:1.

23. **(Withdrawn - Currently Amended)** The crystal of claim 21 [[22]] having amino acid sequence SEQ ID NO:1, with the proviso that at least one methionine is replaced with selenomethionine.

24. **(Withdrawn)** A method of producing human beta secretase, the method comprising expressing the human beta secretase in a mammalian cell line.

25. **(Withdrawn)** A method of producing human beta secretase, the method comprising expressing the human beta secretase in an insect cell line.